

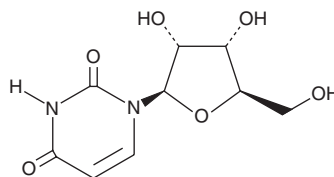
# PRODUCT INFORMATION



## Uridine

Item No. 20300

**CAS Registry No.:** 58-96-8  
**Synonyms:** NSC 20256, 1-β-D-Ribofuranosyluracil, Uracil-1-β-D-ribofuranoside, β-Uridine  
**MF:** C<sub>9</sub>H<sub>12</sub>N<sub>2</sub>O<sub>6</sub>  
**FW:** 244.2  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 261 nm  
**Supplied as:** A crystalline solid  
**Storage:** Room temperature  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

Uridine is supplied as a crystalline solid. A stock solution may be made by dissolving the uridine in the solvent of choice, which should be purged with an inert gas. Uridine is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of uridine in these solvents is approximately 10 and 16 mg/ml, respectively.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of uridine can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of uridine in PBS (pH 7.2) is approximately 5 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

Uridine is a pyrimidine nucleoside composed of uracil (Item No. 26088) and ribose.<sup>1</sup> It forms complementary base pairs with adenosine (Item No. 21232) in RNA.<sup>2</sup> Uridine can be catabolized to uracil via uridine phosphorylase, and it can be phosphorylated to UMP (Item No. 35382) by uridine-cytidine kinase (UCK).<sup>1,3</sup> It is replaced with thymidine (Item No. 20519) in DNA.<sup>4</sup>

### References

1. Yamamoto, T., Koyama, H., Kurajoh, M., *et al.* Biochemistry of uridine in plasma. *Clin. Chim. Acta* **412(19-20)**, 1712-1724 (2011).
2. Zinshteyn, B. and Nishikura, K. Adenosine-to-inosine RNA editing. *Wiley Interdiscip. Rev. Syst. Biol. Med.* **1(2)**, 202-209 (2009).
3. Van Rompay, A.R., Norda, A., Lindén, K., *et al.* Phosphorylation of uridine and cytidine nucleoside analogs by two human uridine-cytidine kinases. *Mol. Pharmacol.* **59(5)**, 1181-1186 (2001).
4. Knoop, V. When you can't trust the DNA: RNA editing changes transcript sequences. *Cell. Mol. Life Sci.* **68(4)**, 567-586 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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